

Y/W



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/662,580	09/15/2003	Jerry Dimsdale	KYRA-420	1307

28584 7590 03/23/2005
STALLMAN & POLLOCK LLP
SUITE 2200
353 SACRAMENTO STREET
SAN FRANCISCO, CA 94111

EXAMINER

NGUYEN, PHU K

ART UNIT	PAPER NUMBER
----------	--------------

2673

DATE MAILED: 03/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/662,580

Applicant(s)

DIMSDALE ET AL.

Examiner

Phu K. Nguyen

Art Unit

2673

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 17-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 17-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

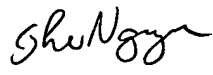
Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.


PHU K. NGUYEN
PRIMARY EXAMINER
GROUP 2400

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 17-22 are rejected under 35 U.S.C. 102(b) as being anticipated by
DHOME (Hierarchical Approach For Polyhedra Recognition by Hypothesis
Accumulation).

As per claim 17, Dhome teaches the claimed “method for merging a plurality of geometric primitives of a same type to form a single geometric primitive of the same type” (Dhome, the construction of a model based on the data points of the two plane surfaces; page 88, column 2, lines 4-26), said method comprising:
deriving a first geometric primitive of the plurality of geometric primitives (Dhome, a first plane surface of the scene local geometrical pattern; figure 2 and page 88, column 2, lines 43-52) such that the first geometric primitive references a first group of scanned surface data points from which the first geometric primitive was derived (Dhome, the derivation of the first plane; page 89, column 1, lines 10-21);
deriving a second geometric primitive of the plurality of geometric primitives (Dhome, a second plane surface of the scene local geometrical pattern; figure 2 and page 88, column 2, lines 43-52) such that the second geometric primitive references a second group of scanned surface data points from which the second geometric primitive was derived (Dhome, the derivation of the second plane; page 89, column 1, lines 10-21);

Art Unit: 2673

creating a new group of points by combining the first group of scanned surface data points, and the second group of scanned surface data points; and deriving a new geometric primitive using the new group of points (Dhome, the derivation of a model object to match the scene object through the group points of the first and second surfaces; page 90, column 1, lines 15-41); such that the new geometric primitive is of the same type as the first geometric primitive and the second geometric primitive (Dhome, the model object containing the first and second surfaces having the same type; page 90, column 1, lines 41-61).

Claim 18 adds into claim 17 “the first geometric primitive and the second geometric primitive are different parts of a single object” (Dhome, the first and second surfaces are different parts of the model object; page 89, column 1, lines 10-40).

Claim 19 adds into claim 17 “deriving a third geometric primitive such that the third geometric primitive references a third group of scanned surface data points from which the third geometric primitive was derived” (Dhome, the model objects 1 and 3 in figure 5 are derived with more than two scanned planes); “wherein the creating the new group points includes combining the third group of scanned with the first group of scanned surface data points, and the second group of scanned surface data points” (Dhome, the new group points of the whole object models; e.g., model 3) ; and “wherein the deriving the new geometric primitive using the new group of points, is such that the new geometric primitive is of the same type as the first geometric primitive and

Art Unit: 2673

the second geometric primitive and the third geometric primitive" (Dhome, page 90, column 2, lines 12-30).

Claim 20 adds into claim 19 "the first geometric primitive and the second geometric primitive and the third geometric primitive are different parts of a single object" (Dhome, the object model 3 in figure 5 containing the first, second, and third surfaces having the same type; page 90, column 2, lines 22-30).

As per claim 21, Dhome teaches the claimed "method for merging two geometric primitives of the same type to form a single geometric primitive of the same type, wherein the two primitives represent portions of a single object and wherein each primitive was derived from a group of points using a fitting process" (Dhome, the construction of a model based on the data points of the two plane surfaces; page 88, column 2, lines 4-26), said method comprising:

creating a new group of points by combining the points used to originally fit each of the two primitives; fitting the new geometric primitive using a fitting technique and the newly generated point group with points from each of the original primitives to form a single new geometric primitive of the same type to replace the two original primitives (Dhome, the derivation of a model object to match the scene object through the group points of the first and second surfaces; page 90, column 1, lines 15-41); and wherein the two primitives represent different portions of a surface of the same object (Dhome, the first and second surfaces are different parts of the model object; page 89, column 1,

Art Unit: 2673

lines 10-40), the new geometric primitive represents the surface of the object which includes the different portions of the surface represented by the two primitives, and a portion of the surface not represented by the two primitives (Dhome, the model object containing the first and second surfaces and some other surfaces not represented by the scanned points of the first and second planes; page 90, figure 4; column 1, lines 41-61).

As per claim 22, Dhome teaches the claimed "method for merging two geometric primitives of the same type to form a single geometric primitive of the same type, wherein the two primitives represent portions of a single object and wherein each primitive was derived from a group of points using a fitting process" (Dhome, the construction of a model based on the data points of the two plane surfaces; page 88, column 2, lines 4-26), said method comprising:

creating a new group of points by combining the points used to originally fit each of the two primitives; and fitting the new geometric primitive using a fitting technique and the newly generated point group with points from each of the original primitives to form a single new geometric primitive of the same type to replace the two original primitives (Dhome, the derivation of a model object to match the scene object through the group points of the first and second surfaces; page 90, column 1, lines 15-41); such that the new geometric primitive is of the same type as the first geometric primitive and the second geometric primitive (Dhome, the model object containing the first and second surfaces having the same type; page 90, column 1, lines 41-61)

Art Unit: 2673

wherein a first primitive of the two primitives is referenced to a first set of points which are part of the group of points (Dhome, a first plane surface of the scene local geometrical pattern; figure 2 and page 88, column 2, lines 43-52; the derivation of the first plane; page 89, column 1, lines 10-21); and wherein a second primitive of the two primitives is referenced to a second set of points which are part of the group of points (Dhome, a second plane surface of the scene local geometrical pattern; figure 2 and page 88, column 2, lines 43-52; the derivation of the second plane; page 89, column 1, lines 10-21); and in response to a merging request the fitting the new geometric object is performed using the first set of points and the second set of points (Dhome, page 89, column 2, line 62 to page 90, column 1, line 59) .


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phu K. Nguyen whose telephone number is (571) 272 7645. The examiner can normally be reached on M-F 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, bipin Shalwala can be reached on (571) 272 7681. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2673

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Phu K. Nguyen
March 10, 2005


PHU K. NGUYEN
PRIMARY EXAMINER
GROUP 2400